

## **AMENDMENTS TO THE CLAIMS**

### **Claims 1-13 (Canceled)**

**Claim 14 (Withdrawn)**      A substrate polishing apparatus comprising:

    a polishing table having a polishing surface;

    a top ring for holding a substrate, wherein a semiconductor substrate held by said top ring is pressed against said polishing surface and a surface to be polished of the semiconductor substrate is polished by relative movement between the semiconductor substrate and said polishing surface;

    a pressing force changing mechanism for changing a pressing force pressing the semiconductor substrate against said polishing surface;

    a relative movement speed changing mechanism for changing speed of relative movement between said top ring and said polishing table;

    a film thickness detector including an eddy current monitor for detecting a film thickness of the semiconductor substrate with the eddy current monitor; and

    a control mechanism operable to control plural polishing processes on said polishing surface of said polishing table while changing the pressing force and the relative movement speed through said pressing force changing mechanism and said relative movement speed changing mechanism and operable to control change from a preceding polishing process to a next polishing process on the basis of a film thickness detection signal from said film thickness detector.

**Claim 15 (Withdrawn)**      The substrate polishing apparatus of claim 14, and further comprising one of a dresser for dressing said polishing surface of said polishing table and a cleaner for cleaning said polishing surface of said polishing table, wherein said control mechanism is operable to control said dresser or said cleaner between the polishing processes to effect dressing or cleaning of said polishing surface of said polishing table.

**Claim 16 (Currently Amended)**      A method of polishing a substrate having a first metal layer and a second metal layer formed under the first metal layer, comprising:

polishing the first metal layer by pressing and moving the first metal layer against a polishing surface with a first polishing fluid;

detecting a polishing end point of the first metal layer by an end point monitor;

~~measuring a film thickness of the first metal layer with an eddy current monitor during said polishing the first metal layer, said eddy current monitor monitoring a combined impedance of said first and second metal layers with a sensor circuit, wherein the eddy current monitor detects an end point of said polishing the first metal layer when the eddy current monitor detects a predetermined thickness of the first metal layer;~~

cleaning the polishing surface by supplying water for removing the first polishing fluid on the polishing surface after the end point eddy current monitor has detected the end point of said polishing the first metal layer;

polishing the second metal layer after said cleaning the polishing surface by pressing and moving the second layer against the polishing surface with a second polishing fluid; ~~and~~

measuring a thickness of the second metal layer with an optical film thickness monitor during said polishing the second metal layer;-

cleaning the substrate after said polishing the second metal layer;

drying the substrate after said cleaning the substrate; and

detecting a film thickness of the substrate after said drying by a dried condition film thickness measuring device, wherein said dried condition film thickness measuring device stores the film thickness of the substrate.

**Claim 17 (Canceled)**

**Claim 18 (Previously Presented)** The method of claim 16, wherein the second metal layer of the substrate is pressed against the polishing surface by a load which is smaller than a load when polishing the first metal layer.

**Claim 19 (Canceled)**

**Claim 20 (Previously Presented)** The method of claim 16, wherein the first and second polishing fluids have a pH at the same side of pH 7.

**Claims 21-22 (Canceled)**

**Claim 23 (Currently Amended)** A method of polishing a substrate having a first metal layer and a second metal layer formed under the first metal layer, comprising:

polishing the first metal layer by pressing and moving the first metal layer against a polishing surface with a first polishing fluid;

detecting a polishing end point of the first metal layer by an end point monitor;

~~measuring a film thickness of the first metal layer with an eddy current monitor during said polishing the first metal layer, said eddy current monitor monitoring a combined impedance of said first and second metal layers with a sensor circuit, wherein the eddy current monitor detects an end point of said polishing the first metal layer when the eddy current monitor detects a state in which the first metal layer has been removed;~~

cleaning the polishing surface by supplying water for removing the first polishing fluid on the polishing surface after the end point ~~eddy current~~ monitor has detected an end point of said polishing the first layer;

polishing the second metal layer after said cleaning the polishing surface by pressing and moving the second metal layer against the polishing surface with a second polishing fluid; and

measuring a thickness of the second metal layer with an optical film thickness monitor during said polishing the second metal layer;

cleaning the substrate after said polishing the second metal layer;

drying the substrate after said cleaning the substrate; and

detecting a film thickness of the substrate after said drying by a dried condition film thickness measuring device, wherein said dried condition film thickness measuring device judges whether the substrate is transferred to the next process.

**Claim 24 (Canceled)**

**Claim 25 (Previously Presented)** The method of claim 23, wherein the second metal layer of the substrate is pressed against the polishing surface by a load which is smaller than a load when polishing the first metal layer.

**Claim 26 (Canceled)**

**Claim 27 (Previously Presented)** The method of claim 23, wherein the first and second polishing fluids have a pH at the same side of pH 7.

**Claims 28-37 (Canceled)**

**Claim 38 (Currently Amended)** A method of polishing a substrate having a first metal layer and a second metal layer formed under the first metal layer, comprising:

polishing the first metal layer by pressing and moving the first metal layer against a polishing surface with a first polishing fluid;

detecting a polishing end point of the first metal layer by an end point monitor;

~~measuring a film thickness of the first metal layer with an eddy current monitor during said polishing the first metal layer, said eddy current monitor monitoring a combined impedance of said first and second metal layers with a sensor circuit, wherein the eddy current monitor detects an end point of said polishing the first metal layer when the eddy current monitor detects a predetermined thickness of the first metal layer;~~

cleaning the polishing surface by supplying water for removing the first polishing fluid on the polishing surface after the end point ~~eddy current~~ monitor has detected an ~~the~~ end point of said polishing the first metal layer; and

polishing the second metal layer after said cleaning the polishing surface by pressing and moving the second metal layer against the polishing surface with a second polishing fluid;-

detecting a film thickness of the substrate after said polishing of the second metal layer has been finished by a film thickness measuring device, wherein said film thickness measuring device judges whether the substrate is polished again.

**Claim 39 (Currently Amended)** A method of polishing a substrate having a first metal layer and a second metal layer formed under the first metal layer, comprising:

polishing the first metal layer by pressing and moving the first metal layer against a polishing surface with a polishing fluid;

detecting a polishing end point of the first metal layer by an end point monitor;

~~measuring a film thickness of the first metal layer with an eddy current monitor during said polishing the first metal layer, said eddy current monitor monitoring a combined impedance of said first and second metal layers with a sensor circuit, wherein the eddy current monitor detects an end point of said polishing the first metal layer when the eddy current monitor detects a predetermined thickness of the first metal layer;~~

cleaning the polishing surface by supplying water for removing the polishing fluid on the polishing surface after the end point ~~eddy current~~ monitor has detected the removal ~~end point~~ of said polishing the first metal layer; and

polishing the second metal layer after said cleaning the polishing surface by pressing and moving the second metal layer against the polishing surface;

detecting a film thickness of the substrate after said polishing of the second metal layer has been finished by a film thickness measuring device, wherein said film thickness measuring device judges whether the substrate is polished again.

**Claim 40 (Previously Presented)** The method of claim 39, further comprising:

measuring a film thickness of the substrate with a film thickness device after said polishing the first metal layer or said polishing the second metal layer is finished, wherein the film thickness device judges whether or not to polish the substrate again.